Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

What is claimed is:

1. (Previously presented) A process for identifying a chemical compound which modulates an interaction between i) an EVH1 (Ena-VASP – (*Drosophilia melanogaster* enabled vasodilator-stimulated phosphoprotein) – Homology 1) binding domain or a protein having an EVH1 binding domain and ii) an EVH1 domain or a protein having an EVH1 domain, which process comprises:

a) bringing an EVH1 binding domain or a protein having an EVH1 binding domain which interacts with an EVH1 domain or a protein having an EVH1 domain into contact with a chemical compound to be examined on a surface which consists of a solid body and is coated with an EVH1 binding domain or a protein having an EVH1 binding domain;

b) incubating the mixture according to a) with an antibody which specifically binds to an EVH1 binding domain or a protein having an EVH1 binding domain or an EVH1 domain or a protein having an EVH1 domain or which has an antigen which is fused with or chemically coupled to these domains or proteins;

c) incubating the mixture according to b) with a second antibody which is capable of specifically binding the antibody from mixture b), said second antibody having ~~a~~ an attached label that can be detected biochemically or physicochemically;

d) detecting the label on the second antibody after incubation according to c) by biochemical or physicochemical detection; and

e) identifying the chemical compound thereby indicated as modulating an interaction between an EVH1 binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain.

2. (Canceled).

3. (Previously presented) A process for identifying a chemical compound which modulates an interaction between an EVH1 (Ena-VASP – (*Drosophilia melanogaster* enabled vasodilator-stimulated phosphoprotein) – Homology 1) binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain, which process comprises:

a) bringing an EVH1 binding domain or a protein having an EVH1 binding domain which interacts with an EVH1 domain or a protein having an EVH1 domain into contact with a chemical compound to be examined;

b) incubating the mixture according to a) with an antibody which specifically binds to an EVH1 binding domain or a protein having an EVH1 binding domain or an EVH1 domain or a protein having an EVH1 domain or which has an antigen which is fused with or chemically coupled to these domains or proteins;

c) incubating the mixture according to b) with a second antibody which is capable of specifically binding the antibody from mixture b), said second antibody having an attached label that can be detected biochemically or physicochemically;

d) detecting the label on the second antibody after incubation according to c) by biochemical or physicochemical detection; and

e) identifying the chemical compound thereby indicated as modulating an interaction between an EVH1 binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain;

wherein step a) takes place on a solid body, said solid body being coated with an EVH1 domain or a protein having an EVH1 domain, the EVH1 domain or the protein having the EVH1 domain on said solid body interacting with an EVH1 binding domain or a protein having an EVH1 binding domain.

4. (Previously presented) The process as claimed in claim 1 or 3, wherein the solid body forms part of a microtiter plate.

5. (Currently amended) The process as claimed in claim 1 or 3, wherein the protein having an EVH1 domain used is VASP (vasodilator-stimulated phosphoprotein) or a fusion protein comprising: i) a first fusion component selected from the group consisting of a VASP and a VASP fragment having an EVH1 domain, and ii) a second fusion component selected from the group consisting of a glutathione S-transferase, a maltose binding protein and a hexahistidine.

6. (Original) The process as claimed in claim 5, wherein the VASP of a vertebrate is used.

7. (Original) The process as claimed in claim 5, wherein human VASP is used.

8. (Currently amended) The process as claimed in claim 1 or 3, wherein the protein having an EVH1 binding domain is zyxin or a zyxin derivative consisting of a fusion protein of glutathione S-transferase having the first 142 amino acids of zyxin fused to the C-terminus of said glutathione S-transferase.

9. (Currently amended) The process as claimed in claim 8, wherein the zyxin derivative comprises a fusion protein which consists essentially of: i) a first fusion component selected from the group consisting of zyxin and a zyxin fragment having an EVH1 binding domain and i) a second fusion component selected from the group consisting of a glutathione S-transferase and a maltose binding protein.

10. (Original) The process as claimed in claim 8, wherein the zyxin of a vertebrate is used.

11. (Original) The process as claimed in claim 8, wherein human zyxin is used.

12. (Previously presented) The process as claimed in claim 1 or 3, wherein a polyclonal antibody is used for the incubation according to b).

13. (Previously presented) The process as claimed in claim 1 or 3, wherein a monoclonal antibody which is synthesized using hybridoma cells is used for the incubation according to b).

14. (Previously presented) The process as claimed in claim 13, wherein the monoclonal antibody is mAB IE245.

15. (Previously presented) The process as claimed in claim 13, wherein the monoclonal antibody is mAB IE273.

16. (Previously presented) The process as claimed in claim 1 or 3, wherein the biochecally or physiochemically detectable antibody label of step c) is a radioactive isotope, a fluorescent dye, or an enzyme is used for the incubation according to c).

17. (Previously presented) The process as claimed in claim 16, wherein the enzyme is alkaline phosphatase or ß-galactosidase.

18. (Previously presented) The process as claimed in claim 16, wherein the fluorescent dye is a lanthanide complex.

19. (Original) The process as claimed in claim 18, wherein the lanthanide complex used is a europium complex.

20. (Previously presented) The process as claimed in claim 1 or 3, wherein the identified compound is a medicament.

21. (Previously presented) A chemical compound for modulating the interaction between an EVH1 binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain identifiable by a process as claimed in claim 1 or 3.

22. (Previously presented) The chemical compound as claimed in claim 20, wherein the chemical compound is a peptide having a sequence selected from the sequences FPPPP (SEQ. ID. NO.1) or WPPPP (SEQ. ID. NO. 2) or a proline-rich homologue or chemical derivative thereof.

23. (Previously presented) A treatment for cardiovascular disorders, inflammatory disorders or neoplastic cell and tissue changes comprising administering to a host in need thereof a chemical compound prepared by the process of claims 1 or 3.

24. (Original) Monoclonal antibody mAB IE245, which binds specifically to VASP.

25. (Original) Hybridoma cells DSM ACC2444, which are capable of producing the monoclonal antibody mAB IE245.

26. (Original) Monoclonal antibody mAB IE273, which binds specifically to VASP.

27. (Original) Hybridoma cells DSM ACC2445, which are capable of producing the monoclonal antibody mAB IE273.

28. (Original) A surface which consists of a solid body and that is coated with an EVH1 binding domain or a protein having an EVH1 binding domain or with an EVH1 domain or a protein having an EVH1 domain.

29. (Original) The surface as claimed in claim 28, wherein the protein having an EVH1 binding domain is zyxin or a zyxin derivative.

30. (Previously presented) The surface as claimed in claim 28, wherein the zyxin derivative is a fusion protein consisting essentially of zyxin or a zyxin fragment and a glutathione S-transferase or of zyxin or a zyxin fragment and a maltose binding protein.

31. (Original) The surface as claimed in claim 29, wherein the zyxin of a vertebrate

is used.

32. (Original) The surface as claimed in claim 29, wherein human zyxin is used.

33. (Original) The surface as claimed in claim 28, wherein the EVH1 binding domain or the protein having an EVH1 binding domain interacts with an EVH1 domain or a protein having an EVH1 domain.

34. (Original) The surface as claimed in claim 33, wherein the protein having an EVH1 domain is VASP or a VASP derivative.

35. (Original) The surface as claimed in claim 34, wherein the VASP of a vertebrate is used.

36. (Original) The surface as claimed in claim 34, wherein human VASP is used.

37. (Original) A microtiter plate which contains a surface as claimed in claim 28.

38. (Original) A process for identifying chemical compounds capable of modulating an interaction between an EVH1 binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain, which process comprises: a) bringing an EVH1 binding domain or a protein having an EVH1 binding domain into contact with an EVH1 domain or a protein having an EVH1 domain in the presence of at least one chemical compound to be examined, where in each case a fluorescent dye which enables an energy transfer between an EVH1 binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain is coupled to the EVH1 binding domain or a protein having an EVH1 binding domain and/or to the EVH1 domain or a protein having an EVH1 domain; and b) spectroscopically determining the presence or absence of chemical compounds capable of modulating an interaction following incubation according to a).

39. (Original) The process as claimed in claim 38, wherein the fluorescent dye is

APC, Cy5, or a lanthanide complex such as a europium complex.

40. (Original) The process as claimed in claim 38, wherein the protein having an EVH1 domain is VASP or a VASP derivative.

41. (Original) The process as claimed in claim 40, wherein the VASP of a vertebrate is used.

42. (Original) The process as claimed in claim 40, wherein human VASP is used.

43. (Original) The process as claimed in claim 38, wherein the protein having the EVH1 binding domain is zyxin or a zyxin derivative.

44. (Previously presented) The process as claimed in claim 43, wherein the zyxin derivative is a fusion protein consisting essentially of zyxin or a zyxin fragment with a glutathione S-transferase or of zyxin or a zyxin fragment with maltose binding protein.

45. (Original) The process as claimed in claim 43, wherein the zyxin of a vertebrate is used.

46. (Original) The process as claimed in claim 43, wherein human zyxin is used.

47. (Canceled).

48. (Original) A method for producing a pharmaceutical preparation for modulating the interaction between an EVH1 binding domain or a protein having an EVH1 binding domain and an EVH1 domain or a protein having an EVH1 domain, which comprises adding pharmaceutical excipients and/or pharmaceutical carriers to a compound identified by the process as claimed in claim 38.